

between them, so that, in all probability, this will prove to be a distinct species; but this I hope Mr. Darwin will be able to determine.

Another and probably a different species has been found by Mr. Gavey at Chipping Campden in Gloucestershire, in the top beds of the lower Lias, which are very prolific in organic remains wherever they occur. As the Cirripedes are usually rare in a fossil state, especially in the Oolites and Lias, it seemed desirable to notify the existence of some species of Lepadidæ during these geological periods, — a somewhat earlier date than the one previously indicated.

MR. YARRELL'S COLLECTIONS.

Our readers will be gratified to learn, that the Trustees of the British Museum have secured for the Museum the collection of British Fish, and all the specimens of Birds and other animals illustrating Mr. Yarrell's various papers in the Transactions of the Linnæan and Zoological Societies, at the sale of his property.

On the Stereognathus Ooliticus, from the Stonesfield Slate.

By Prof. OWEN, F.R.S., F.G.S.

The subject of this paper was a small mammal, represented by a fragment of a lower jaw retaining three molar teeth, which was obtained by the Rev. J. Dennis from the Stonesfield-slate of Oxfordshire, and named *Stereognathus Ooliticus* by Mr. E. Charlesworth. This specimen, described in detail by Prof. Owen at the British Association Meeting in September last, indicated, in the author's opinion, an animal allied to some extinct genera of even-toed Pachyderms, viz. the *Hyracotherium*, *Microtherium*, and *Hyopotamus* of the Tertiary deposits; and he concluded therefore that the *Stereognathus* was most probably a diminutive non-ruminant Artiodactyle of omnivorous habits.

With regard to the zoological reasons for referring this peculiar and ancient fossil to the type of animal form above alluded to, the Professor entered at some length into the analysis of the mental processes by which the palæontologist aims at the restoration of an unknown mammal from such a fragment as the fossil under notice. Its mammalian character is decided by the two-fanged implantation of the teeth, and its pachydermatous affinities are evidenced by the peculiar sex-cuspid and cingulated molars. These zoological relations are determined from the knowledge that such structural peculiarities obtain in certain known Pachydermata. Morphology, therefore, or the study of form, rather than physiology, or the known relation of organs to function, is the guide in this determination; but the Professor expressed his opinion that this example could not be cited as showing that there is no physiological, comprehensible, or rational law (in contradistinction to the morphological or empirical) which can be a guide in the determination of fossil remains.